CLAIMS

WHAT IS CLAIMED IS:

1. A quarter-wave transformer in a handheld wireless communications device, comprising:

a trace positioned on a substrate; and

a dielectric block mounted on the substrate and disposed on top of the trace,

wherein relative position or orientation of the dielectric block with respect to the trace affects the electrical properties of the trace.

2. A circuit card assembly, comprising:

a dielectric material;

a printed circuit board; and

an electrical component disposed on the printed circuit board and having an electrical parameter that is sensitive to a dielectric constant of a substance proximate to the electrical component,

wherein the dielectric material is attached to the printed circuit board proximate to the electrical component and modifies the electrical parameter.

3. The circuit card assembly according to claim 2, wherein the dielectric material is in a form of a block.

4. The circuit card assembly according to claim 2, wherein the dielectric material is attached to the printed circuit board and is disposed on top of the electrical component.

5. The circuit card assembly according to claim 2, wherein the dielectric material is attached to the printed circuit board and is disposed under the electrical component.

6. The circuit card assembly according to claim 2, wherein the electrical component is a trace.

7. The circuit card assembly according to claim 2, wherein the dielectric material is attached to the printed circuit board via adhesive dots attached to the printed circuit board.

8. The circuit card assembly according to claim 2, wherein the dielectric material is attached to the printed circuit board via pads on a surface of the dielectric material.

9. The circuit card assembly according to claim 2, wherein the dielectric material is in direct contact with the electrical component.

10. The circuit card assembly according to claim 2, wherein the electrical

parameter is modified as a function of an orientation or a position of the dielectric material relative to the electrical component.

11. A method for modifying an electrical parameter of an electrical component on a circuit board, comprising the steps of:

(a) mounting the electrical component on a first surface of the circuit board; and

(b) mounting a dielectric material to a circuit board and disposing the dielectric material in proximity to the electrical component such that the electrical parameter of the electrical component changes as a function of position or orientation of the dielectric material relative to the electrical component.

12. The method according to claim 11, wherein step(b) includes the step of disposing the dielectric material on top of the electrical component.

13. The method according to claim 11, wherein step(b) includes the step of placing the dielectric material in direct contact with the electrical component.

14. The method according to claim 11, further comprising the steps of:

(c) testing the electrical parameter of the electrical component; and

(d) if the tested electrical parameter is not approximately an intended value, then rearranging the dielectric material relative to the electrical component until the tested electrical parameter is approximately the intended value.

15. The method according to claim 11, further comprising the step of:

(c) modifying, in situ, the electrical parameter of the electrical component by changing the position or the orientation of the dielectric material relative to the electrical component.